ABSTRACT:

~~SIGNAL ESTIMATION METHODS AND APPARATUS~~

~~Methods~~ A method and an apparatus for estimating likelihood values for signals of a sequence of signals transmitted from a transmitter through a channel to a receiver ~~are described~~. The ~~methods employ~~ method employs a plurality of particles, each particle ~~comprising~~ having a postulated transmitted signal history, and ~~. An embodiment of the method comprises~~ includes ~~initialising~~ initializing a set of ~~said~~ particles,[[;]] evolving ~~said~~ the set of particles over time to generate a succession of evolved sets of particles,[[;]] tracing a plurality of paths through ~~said~~ the succession of evolved sets of particles backwards in time,[[;]] and determining a sequence of likelihood values for ~~said~~ the transmitted sequence of signals using ~~said~~ the paths. ~~The invention is particularly useful for communications~~ Communication systems in which a receiver receives signals from a transmitter with a plurality of transmit antennas, such as MIMO (Multiple-Input Multiple-Output) systems are able to use this method.

~~Figure 7.~~